New Jersey ACCUTEST LABORATORIES

03/15/13

Technical Report for

Anderson, Mulholland & Associates

BMSMC, Building 5 Area, PR

SM04.00.06 Area E ICM

Accutest Job Number: JB29314

Sampling Dates: 02/19/13 - 02/20/13

Report to:

Anderson, Mulholland & Associates

ttaylor@amaiconsult.com

ATTN: Terry Taylor

Total number of pages in report: **13**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV

Sections: 1 2 3 4 5

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Sample Summary

Anderson, Mulholland & Associates

Job No: JB29314

BMSMC, Building 5 Area, PR
Project No: SM04.00.06 Area E ICM

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB29314-1	02/19/13	16:10	TT	02/21/13	SO	Soil	AREAEC7_BOT
JB29314-2	02/20/13	13:00	TT	02/21/13	SO	Soil	AREAEC8_7FT
JB29314-3	02/20/13	13:45	TT	02/21/13	SO	Soil	AREAEC8_BOT
JB29314-4	02/20/13	13:45	TT	02/21/13	SO	Soil	AREAEC8_BOTD

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Anderson, Mulholland & Associates	**Job No**	JB29314
Site:	BMSMC, Building 5 Area, PR	**Report Date**	3/8/2013 3:58:58 PM

On 02/21/2013, 4 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 3 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB29314 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: SO **Batch ID:** VD8399

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB28910-2MS, JB28910-2MSD were used as the QC samples indicated.
- JB29314-1: Diluted due to high concentration of target compound.

Matrix: SO **Batch ID:** VD8401

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB29173-8MS, JB29173-8MSD were used as the QC samples indicated.

Matrix: SO **Batch ID:** VI7353

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB29330-1MS, JB29330-1MSD were used as the QC samples indicated.

Matrix: SO **Batch ID:** VO5887

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB29267-11MS, JB29216-1DUP were used as the QC samples indicated.
- RPD(s) for Duplicate for Acetone are outside control limits. High RPD due to low concentration of hit

Wet Chemistry By Method SM2540 G-97

Matrix: SO **Batch ID:** GN80464

- The data for SM2540 G-97 meets quality control requirements.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JB29314
Account: Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR
Collected: 02/19/13 thru 02/20/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB29314-1	**AREAEC7_BOT**					
Ethylbenzene [a]		1200	86	23	ug/kg	SW846 8260B
Xylene (total) [a]		4500	86	12	ug/kg	SW846 8260B
JB29314-2	**AREAEC8_7FT**					
Ethylbenzene		17600	650	170	ug/kg	SW846 8260B
4-Methyl-2-pentanone(MIBK)		2150	330	49	ug/kg	SW846 8260B
Toluene		21.5 J	65	6.9	ug/kg	SW846 8260B
Xylene (total)		55700	650	91	ug/kg	SW846 8260B
JB29314-3	**AREAEC8_BOT**					
Acetone		71.8	19	3.2	ug/kg	SW846 8260B
Benzene		1.1 J	1.9	0.22	ug/kg	SW846 8260B
Ethylbenzene		0.59 J	1.9	0.49	ug/kg	SW846 8260B
Xylene (total)		34.5	1.9	0.26	ug/kg	SW846 8260B
JB29314-4	**AREAEC8_BOTD**					
Acetone		118	20	3.3	ug/kg	SW846 8260B
Benzene		0.96 J	2.0	0.23	ug/kg	SW846 8260B
Xylene (total)		34.0	2.0	0.27	ug/kg	SW846 8260B

(a) Diluted due to high concentration of target compound.

New Jersey ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AREAEC7_BOT		
Lab Sample ID:	JB29314-1	**Date Sampled:**	02/19/13
Matrix:	SO - Soil	**Date Received:**	02/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	72.7
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D205895.D	1	02/26/13	ET	02/21/13 11:00	n/a	VD8399
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	860	150	ug/kg	
71-43-2	Benzene	ND	86	10	ug/kg	
100-41-4	Ethylbenzene	1200	86	23	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	430	65	ug/kg	
108-88-3	Toluene	ND	86	9.1	ug/kg	
1330-20-7	Xylene (total)	4500	86	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
17060-07-0	1,2-Dichloroethane-D4	98%		70-122%
2037-26-5	Toluene-D8	97%		81-127%
460-00-4	4-Bromofluorobenzene	96%		66-132%

(a) Diluted due to high concentration of target compound.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AREAEC8_7FT		
Lab Sample ID:	JB29314-2	**Date Sampled:**	02/20/13
Matrix:	SO - Soil	**Date Received:**	02/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	90.5
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D205945.D	1	02/27/13	ET	02/21/13 11:00	n/a	VD8401
Run #2	D205896.D	1	02/26/13	ET	02/21/13 11:00	n/a	VD8399

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.6 g	5.0 ml	100 ul
Run #2	4.6 g	5.0 ml	10.0 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	650	110	ug/kg	
71-43-2	Benzene	ND	65	7.8	ug/kg	
100-41-4	Ethylbenzene	17600 [a]	650	170	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	2150	330	49	ug/kg	
108-88-3	Toluene	21.5	65	6.9	ug/kg	J
1330-20-7	Xylene (total)	55700 [a]	650	91	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	96%	70-130%
17060-07-0	1,2-Dichloroethane-D4	99%	100%	70-122%
2037-26-5	Toluene-D8	100%	101%	81-127%
460-00-4	4-Bromofluorobenzene	95%	98%	66-132%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AREAEC8_BOT		
Lab Sample ID:	JB29314-3	**Date Sampled:**	02/20/13
Matrix:	SO - Soil	**Date Received:**	02/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	59.1
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	O133469.D	1	02/26/13	DPP	02/21/13 11:00	n/a	VO5887
Run #2							

	Initial Weight
Run #1	4.5 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	71.8	19	3.2	ug/kg	
71-43-2	Benzene	1.1	1.9	0.22	ug/kg	J
100-41-4	Ethylbenzene	0.59	1.9	0.49	ug/kg	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	9.4	1.4	ug/kg	
108-88-3	Toluene	ND	1.9	0.20	ug/kg	
1330-20-7	Xylene (total)	34.5	1.9	0.26	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
17060-07-0	1,2-Dichloroethane-D4	107%		70-122%
2037-26-5	Toluene-D8	106%		81-127%
460-00-4	4-Bromofluorobenzene	100%		66-132%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AREAEC8_BOTD		
Lab Sample ID:	JB29314-4	**Date Sampled:**	02/20/13
Matrix:	SO - Soil	**Date Received:**	02/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	57.6
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I182045.D	1	03/06/13	SJM	02/21/13 11:00	n/a	VI7353
Run #2							

	Initial Weight
Run #1	4.4 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	118	20	3.3	ug/kg	
71-43-2	Benzene	0.96	2.0	0.23	ug/kg	J
100-41-4	Ethylbenzene	ND	2.0	0.52	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	9.9	1.5	ug/kg	
108-88-3	Toluene	ND	2.0	0.21	ug/kg	
1330-20-7	Xylene (total)	34.0	2.0	0.27	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%
17060-07-0	1,2-Dichloroethane-D4	105%		70-122%
2037-26-5	Toluene-D8	106%		81-127%
460-00-4	4-Bromofluorobenzene	110%		66-132%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New Jersey ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

2235 Route 130, Dayton NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # 794795753543 | Bottle Order Control #
Accutest Quote # | Accutest Job # JB29314

Client / Reporting Information

Company Name: AMAI
Address: 110 Corporate Park Drive
City: White Plains State: NY Zip: 10604
Project Contact: T. Taylor E-mail: ttaylor@amaiconsult.com
Phone #: Fax #:
Sampler's Name: Client Purchase Order #:

Project Information

Project Name: Area 8 ICM
Street:
City: State:
Project #:

Requested Analysis

8260 ☐ BTEX ☐ MTBE ☐ | 624 ☐ MTBE ☐ | 8021 ☐ TBA ☐ | 602 ☐ NAP ☐ | PAVG ☐ PALG ☐
8260 ☐ TBA ☐ | 624 ☐ NAP ☐ | TCL ☐ +10 ☐ | PPL ☐ +15 ☐ | STARS ☐ MTBE ☐
8270 ☐ ABN ☐ | 625 ☐ BN ☐ | TCL ☐ PAH ☐ | PPL ☐ PADF ☐ | STARS ☐ +10s ☐
Bldg 5 Special List

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	LAB USE ONLY
-1	AREAEC7_BOT	40	2/14/13	1640		SO	4									M33 T1
-2	AREAEC8_TFT		2/20/13	1300		SO	4									1493
-3	AREAEC8_BOT		2/20/13	1345		SO	4									4905
-4	AREAEC8_BOTD	41	2/20/13	1345		SO	4									

Turnaround Time (Business Days)

☒ Std. 15 Business Days — Approved By: / Date:
☐ 10 Day *RUSH*
☐ 5 Day *RUSH*
☐ 3 Day *EMERGENCY*
☐ 2 Day *EMERGENCY*
☐ 1 Day *EMERGENCY*
☐ Other

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

☐ Commercial "A"
☐ Commercial "B"
☐ NJ Reduced
☐ NJ Full
☒ Other Full T1
☐ FULL CLP
☐ NYASP Category A
☐ NYASP Category B
☐ State Forms
☐ EDD Format _____

Commercial "A" = Results Only

Comments / Remarks

☒ 3 Encores TAS 2/21/13

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received by:	Relinquished by:	Date Time	Received by:
1	2/20/13 1500	Fed	2 Fed	2/21/13 0930	2
Relinquished by: 3	Date Time:	Received by: 3	Relinquished by: 4	Date Time:	Received by: 4
Relinquished by: 5	Date Time:	Received by: 5	Custody Seal # 708	Preserved where applicable ☐	On Ice ☒	Cooler Temp. 3.0°C

rec'd intact TAS 2/21/13

JB29314: Chain of Custody
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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB29314 **Client:** **Project:**

Date / Time Received: 2/21/2013 **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (3/3); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Bar Therm		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

5.1
5

JB29314: Chain of Custody
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